

WEIGHTS AND MEASURES



AZDA
ARIZONA
DEPARTMENT
OF AGRICULTURE

Self-Study Course

Introduction to RSR Licensing

Who is the training for?

- Registered Service Representatives (RSR) licensed by the Department of Agriculture, Weights and Measures Services Division.
- Anyone studying for the RSR licensing exam.
- Note: While there may be useful information in this presentation, vapor recovery RSRs are required to complete a Division training course before taking the initial competency examination and every 36 months thereafter.



Goals:

Provide you with the information you will need to pass the RSR test and the tools you need to do your job!

You will learn:

- How to use the web site links to find important reference material
- What laws affect you as an RSR
- How to use the National Institute of Standards and Technology (NIST) handbooks
- How to apply for the RSR exam



Important Terms

- Division - Means the Arizona Department of Agriculture, Weights and Measures Services Division
- A.R.S. - Arizona Revised Statutes. These are the laws passed by the state legislature.
- A.A.C. - Arizona Administrative Code. These are the rules passed by state agencies.



Important Terms, cont.

- RSR - Registered Service Representative
- RSA - Registered Service Agency
- NCWM - National Conference on Weights and Measures - a professional nonprofit association of state and local weights and measures officials, federal agencies, manufacturers, retailers and consumers. NCWM develops the standards that are adopted in Arizona.



Important Terms, cont.

- NTEP - National Type Evaluation Program. This is the program administered by the National Conference on Weights and Measures (NCWM). NTEP certification provides confidence that a device will be manufactured in accordance with standards as adopted by NCWM and published in Handbook 44.
- NIST - National Institute of Standards and Technology - federal agency that collaborates with U.S. and international weights and measures organizations. They publish the standards handbooks and implement the program to ensure traceability of state weights and measures standards to the International System of Units, known as SI.



How do I become an RSR?

- You must work for a Registered Service Agency (RSA)
- You must pass a competency exam
 - Score 75% or greater
 - Cannot take more than 3 times in 6 months and wait 7 days prior to retaking the exam
- You must complete the license application
- Pay the initial license fee

To maintain the license, an annual license fee shall be paid

Information on testing and the license application can be found at:

<https://agriculture.az.gov/weights-measures/licensing/registered-service-agency-or-representative>



What is a RSA?

RSA = Registered Service Agency (defined in A.R.S. § 3-3401)

RSA means any agency, firm, company, or corporation that for hire, award, commission or any other payment of any kind

- installs,
- services,
- repairs, or
- reconditions

a commercial device or tests or repairs vapor recovery systems or vapor recovery components and that has been issued a license by the division.



What is a RSR?

RSR = Registered Service Representative (defined in A.R.S. § 3-3401)

RSR means any individual that for hire, award, commission or any other payment of any kind

- installs,
- services,
- repairs, or
- reconditions

a commercial device or tests or repairs vapor recovery systems or vapor recovery components and that has been issued a license by the division.



What is an RSR, cont....

- A RSR is an employee of a RSA who has been issued a license by the Department of Agriculture, Weights and Measures Services Division.
- The RSR can place a commercial device into service, repair a device, or remove an official rejection tag.
- The RSR must carry their license with them when performing RSR duties.



What if I am the only employee/RSR

When there is a company that consists of only one employee (ie. Self-Employed), you must first become an RSA. After your RSA is established, you will then complete the qualifications and become an RSR.

The current annual fee for the RSA license is \$24.00 and the annual fee for the RSR license is \$4.80.



What is a commercial device?

A commercial device means any weighing, measuring, metering or counting device that is used to determine the direct cost of things sold or offered or exposed for sale, or used to establish a fee for service if the cost is based on weight, measure, or count, except that it does not include those devices used for in-house packaging, inventory control or law enforcement purposes.

A.R.S. § 3-3401 (13)



Examples of commercial devices:



Water Vending Machines



Livestock Scales



Truck Scales

Deli Scales



Fuel Dispensers



Commercial Device License

Statutes and rules regarding licensure and certification can be viewed at <https://agriculture.az.gov>

ARIZONA DEPARTMENT OF AGRICULTURE
WEIGHTS AND MEASURES SERVICES DIVISION
Phone: (602)542-3578

BMF#: 98765

Facility License #

RSA
License

Number Of
Devices

Fee
Code

Expires On: 10/01/2021

License Expiration

DEVICE LICENSE

JOE'S GROCERY
9876 A STREET
PHOENIX AZ 99000

Location Address

JOE'S GROCERY CORPORATE OFFICE
1234 MAIN STREET
ANYTOWN USA 85000

Mailing Address

Number of
Commercial
Devices

Fee Code designates the
type of device licensed. Fee
code 001 is a small scale
with a capacity of 0 to 500
pounds.

**THIS LICENSE MUST BE POSTED ON PREMISES IN A MANNER
THAT PROVIDES THE DEPARTMENT ACCESS TO THE LICENSE DURING NORMAL BUSINESS HOURS**



So why are RSRs important?

- Having trained personnel using calibrated equipment to verify the accuracy of the sale of goods is imperative.
- What would happen if all scales in Arizona were calibrated with a one-pound weight that was only 0.9 pounds?
- What if fuel dispensers, propane, or other metering equipment did not dispense the proper quantities?
- What impacts would this have on businesses and consumers?



What are the responsibilities of an RSR?

- The responsibilities are outlined in R3-7-602(B):
 - Install only commercial devices that meet the requirements in A.A.C. Title 3, Chapter 7
 - Perform all appropriate tests when repairing a commercial device to ensure that the requirements of A.R.S. Title 3, Chapter 19, A.A.C. Title 3, Chapter 7, and Handbook 44 are met.

Note: The requirements of Handbook 44 are enforceable as law under A.R.S. § 3-3413.



Example

We have seen some businesses purchase scales from the internet. While there is nothing wrong with this, in some instances they are purchasing scales that are not legal-for-trade (NTEP-approved). As a licensed RSR, you cannot calibrate or place in service a scale that is not NTEP approved. It would be your duty to notify the owner, secure the device from use, and notify the Division that the scale is not approved for commercial use.



Example

- Upon inspection of a truck scale, it was identified that the scale was not NTEP approved. The scale had been licensed by the RSR.
- The Division tagged the scale out of service since non-NTEP approved scales are not allowed to be used in the state (and the scale was not grandfathered prior to 1975).
- This was a very expensive lesson.



Question

An RSR can leave their license at the office while performing RSR duties?

True

or

False



Responsibilities of an RSR...continued

- Report to the user equipment or commercial devices that do not conform to NIST standards
- Complete Placed in Service Reports accurately within 7 days and provide a copy to the owner or operator.
- Report to the Division (602-542-4373 or dwm@azda.gov) within 1 hour of finding a device installed to fraudulently obtain consumer credit card information (skimming device). Also, notify the local police of such device.



Example

You are called to a location to calibrate a dispenser meter. You notice that the dispenser is leaking gasoline and you are not able to calibrate the meter without further repairs that cannot be done at that time. What should you do?

1. **Notify the station owner/operator.**
2. **Clearly document your findings/recommendations on the invoice or work order.**
3. **Place the dispenser out of service.**
4. **Notify the Division if the site owner/operator continues use without repair.**



Example

The Division routinely finds grocery store device licenses with inaccurate scale counts. One reason this happens is because the person installing scales submits the placed in service report adding the new scales. However, the store operator or someone else removed the old scales. Therefore, the store operator is being billed for scales that have been removed from the site, but not the license. What can you do to help the customer?

When adding new scales to the device license, inform the site operator to review the device license and verify the scale count is correct. If practical, remove devices from the license that are no longer present.



Question

When a device has been tagged with a red “Out of Service” tag, who can make the repairs ?

- A) The owner/operator
- B) A licensed RSR
- C) Weights and Measures Services Division staff

A.R.S. § 3-3471(B)(1) allows a RSR to remove an official rejection tag (Out-of-Service tag) placed on a commercial device.



RSR Equipment Certification

- All test measures used to calibrate commercial devices must be certified prior to use and on an annual basis.
- How do I get my test measures certified?
 - Schedule an appointment with the Arizona Metrology Laboratory.
 - Utilize another NIST-certified metrology laboratory. You will need to submit the certification documentation to the Arizona Metrology Laboratory to maintain your Arizona RSR/RSA license.
- Arizona Metrology Lab: 602-771-4938, fax 623-463-0440



Question

You are called by a gas station owner to perform repairs in response to a non-compliant device that was tagged out of service by the Division. When you perform the repair you notice other deficiencies that do not comply with Handbook 44, but were not noted as part of the tag.



Do you need to address these deficiencies prior to placing the device back into service?

TRUE
or
FALSE



TRUE

- The RSR is required to perform all appropriate tests when repairing a commercial device to ensure that the requirements of A.R.S. Title 3, Chapter 19, A.A.C. Title 3, Chapter 7, and Handbook 44 are met.
- When submitting a Placed In Service Report, the RSR is certifying that the device meets the standards.



Question

If an RSR finds a credit card skimming device installed in a fuel dispenser, they must.....

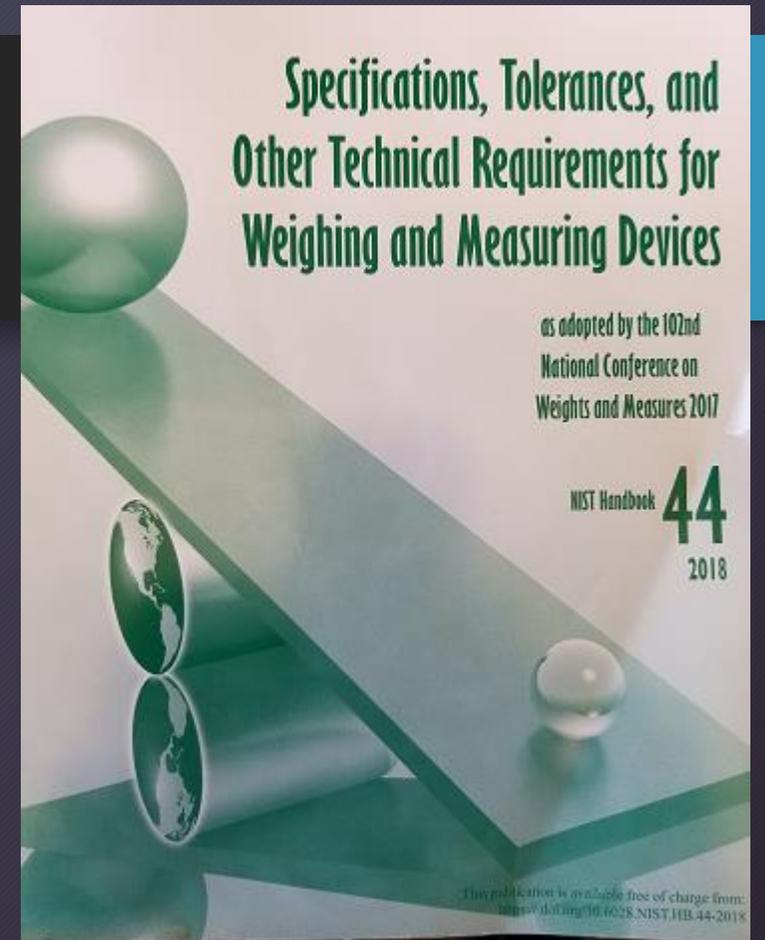
- A) Contact local law enforcement
- B) Report to the Division within one hour by phone or email
- C) Both of the above

See R3-7-602(B)(1)(f)



What is Handbook 44?

- Provides the specifications, tolerances, and other technical requirements required to be met by all commercial devices per A.R.S. § 3-3413.
- Unless otherwise stated in rules, all devices must meet the requirements in Handbook 44.
- The applicable edition of Handbook 44 is adopted in A.A.C. R3-7-101.



[Click here to obtain the Handbook from the NIST website](https://doi.org/10.6028/NIST.HB.44-2018)



Handbook 44 Components

- General Code - This section of the handbook contains requirements that pertain to all commercial devices.
- This is found in Section 1.10 of the handbook.
- Examples include (but are not limited to):
 - Requirements for commercial devices to be labeled with identification (Handbook 44, section G-S.1.)
 - Commercial devices shall be suitable for the service in which they are used (Handbook 44, section G-UR-1.1.)
 - Maintenance requirements (Handbook 44, section G-UR.4.1.)

Review and become familiar with Handbook 44 General Code requirements



Handbook 44 Components, cont.

After the General Code, each section includes the requirements for the particular devices. A few examples include:

- scales (section 2.20),
- liquid measuring devices (i.e. Fueling devices) (section 3.30) and
- water meters (section 3.36).

Review the Table of Contents of Handbook 44 to verify which section(s) are applicable to the work you will perform as an RSR. Review those sections to become familiar with the requirements.



Handbook 44 Components, cont.

Each technical section of the Handbook is divided into 5 sections:

- **Application** - includes the applicability and exemptions from the code
- **Specifications** - relates to the design of the equipment
- **Notes** - includes the official testing requirements
- **Tolerance** - specifies the performance requirements. Fixes the allowable error or departure from true performance or value.
- **User Requirements** - Directed to the owner and operator of a device and also apply to the selection, installation, use, and maintenance of devices.



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Example

Let's take a look at an example from the General Code. The General Code applies to all commercial devices.



G-S.1. Identification

This is the section that states all commercial devices must have an identification clearly and permanently marked on the device.

G-S.1. Identification. – All equipment, except weights and separate parts necessary to the measurement process but not having any metrological effect, shall be clearly and permanently marked for the purposes of identification with the following information:

- (a) the name, initials, or trademark of the manufacturer or distributor;
- (b) a model identifier that positively identifies the pattern or design of the device;
 - (1) *The model identifier shall be prefaced by the word “Model,” “Type,” or “Pattern.” These terms may be followed by the word “Number” or an abbreviation of that word. The abbreviation for the word “Number” shall, as a minimum, begin with the letter “N” (e.g., No or No.). The abbreviation for the word “Model” shall be “Mod” or “Mod.” Prefix lettering may be initial capitals, all capitals, or all lower case.*
[Nonretroactive as of January 1, 2003]
(Added 2000) (Amended 2001)
- (c) *a nonrepetitive serial number, except for equipment with no moving or electronic component parts and software;*
[Nonretroactive as of January 1, 1968]
(Amended 2003 and 2016)
 - (1) *The serial number shall be prefaced by words, an abbreviation, or a symbol, that clearly identifies the number as the required serial number.*
[Nonretroactive as of January 1, 1986]
 - (2) *Abbreviations for the word “Serial” shall, as a minimum, begin with the letter “S,” and abbreviations for the word “Number” shall, as a minimum, begin with the letter “N” (e.g., S/N, SN, Ser. No., and S. No.).*
[Nonretroactive as of January 1, 2001]
- (d) the current software version or revision identifier for not-built-for-purpose, software-based devices manufactured as of January 1, 2004, and all software-based devices (or equipment) manufactured as of January 1, 2022;
(Added 2003) (Amended 2016)
 - (1) *The version or revision identifier shall be:*



G-T. Tolerances

G-T.1. Acceptance Tolerances. – Acceptance tolerances shall apply to equipment:

- (a) to be put into commercial use for the first time;
- (b) that has been placed in commercial service within the preceding 30 days and is being officially tested for the first time;
- (c) that has been returned to commercial service following official rejection for failure to conform to performance requirements and is being officially tested for the first time within 30 days after corrective service;
- (d) that is being officially tested for the first time within 30 days after major reconditioning or overhaul; and
- (e) undergoing type evaluation.
(Amended 1989)

G-T.2. Maintenance Tolerances. – Maintenance tolerances shall apply to equipment in actual use, except as provided in G-T.1. Acceptance Tolerances.

G-T.3. Application. – Tolerances “in excess” and tolerances “in deficiency” shall apply to errors in excess and to errors in deficiency, respectively. Tolerances “on overregistration” and tolerances “on underregistration” shall apply to errors in the direction of overregistration and of underregistration, respectively. (Also see Appendix D, Definitions.)

G-T.4. For Intermediate Values. – For a capacity, indication, load, value, etc., intermediate between two capacities, indications, loads, values, etc., listed in a table of tolerances, the tolerances prescribed for the lower capacity, indication, load, value, etc., shall be applied.

In the Tolerance section G-T., it outlines when the acceptance tolerance or maintenance tolerance would be applied.



Question

Are specifications, tolerances, and technical requirements for commercial devices found in NIST Handbook 44?

A) Yes

B) No



QUESTION

You need to study everything in Handbook 44:

TRUE

Or

FALSE

You only need to study the General Code (Section 1.10) and those sections applicable to your field of expertise.



Examination Procedure Outlines (EPOs)

- NIST has developed "Examination Procedure Outlines (EPOs) For Commercial Weighing and Measuring Devices," provides an outline of the Handbook 44 requirements.
- Developed by NIST as a guide for the field examination of commercial weighing and measuring devices.
- <https://www.nist.gov/pml/weights-and-measures/nist-examination-procedure-outlines-epos>



Question

An RSR can use tolerances for adjustment of devices?

A) True

B) False

False, see Handbook 44, G-UR.4.3. Use of Adjustments. - Weighing elements and measuring elements that are adjustable shall be adjusted only to correct those conditions that such elements are designed to control, and shall not be adjusted to compensate for defective or abnormal installation or accessories or for badly worn or otherwise defective parts of the assembly. Any faulty installation conditions shall be corrected, and any defective parts shall be renewed or suitably repaired, before adjustments are undertaken. **Whenever equipment is adjusted, the adjustments shall be so made as to bring performance errors as close as practicable to zero value.**



Prohibited Acts (R3-7-604(B))

- An RSA or RSR shall not:
 - File a fraudulent Placed in Service Report
 - Delegate licensed authority to an unlicensed person
 - Perform a function without certified equipment
 - Install or place in service a commercial device before satisfying all of the statutory and rule requirements



Prohibited Acts (R3-7-604(B)), cont...

An RSA or RSR shall not:

- Fail to report to the Division a commercial device that is found to be out of compliance
- Install, calibrate, or repair a commercial device without placing a decal or label on the device as prescribed by the associate director
- Leave a location where there is a non-compliant commercial device without securing the commercial device from commercial use



Civil Penalties

As an RSR, the Division relies on you to perform and certify to the Division that the work has been done correctly. Consumers in Arizona rely on you to ensure that they are getting what they pay for. As such, you may subject yourself to civil penalties for not submitting Placed in Service Reports, failing to follow Handbook 44, statutes, or rules. According to A.R.S. § 3-3475, penalties could be:

- Up to \$1,000 civil penalty per violation.
- Up to a maximum of \$50,000 per 30 days.



Question

I have been called to respond to a red tag at the site. When I arrive I cannot find the tag or information regarding the issue. What can I do?

There are a couple options:

1. All inspection reports are posted online and can be looked up by inspection number, BMF, business name, or city.
https://ctutools.azda.gov/dwm/pv/inspection_search.asp#
2. Email dwm@azda.gov or call the Team Lead for the area
(<https://agriculture.az.gov/about-us/divisions/weights-measures-services-division>)
3. Ask the site operator if they have a copy of the inspection report.



How do I take the RSR exam?

- <https://agriculture.az.gov/weights-measures/licensing/registered-service-agency-or-representative>
- This website includes important information such as:
 - How do I become an RSR?
 - How do I become a vapor RSR?
 - RSR testing information
 - Study guides



Resources

Resource Title	Website Link
RSR/RSA Licensing Information	https://agriculture.az.gov/weights-measures/licensing/registered-service-representative-or-agent
Arizona Revised Statutes (ARS), Title 3, Chapter 19, Articles 4 and 5	https://www.azleg.gov/arsDetail/?title=3 (See Chapter 19)
Arizona Administrative Code (AAC), Title 3, Chapter 7, Article 6	http://apps.azsos.gov/public_services/Title_03/3-07.pdf
Handbook 44	https://www.nist.gov/pml/weights-and-measures/nist-handbooks#
Handbook 112 (optional)	https://www.nist.gov/pml/weights-and-measures/nist-handbooks#
NTEP Certificate of Conformance Lookup	http://www.ncwm.net/ntep/cert_search
CTEP Certificate of Conformance Lookup	https://www.cdfa.ca.gov/dms/ctep.html
Arizona Licensing Fee Codes	https://agriculture.az.gov/weights-measures/licensing (See Fees, Penalties, and Charges under Important Documents)



See our other videos

- To learn more about important topics related to an RSR, please see our other videos:
- NTEP
- How to complete Placed in Service Reports
- Examples of Placed in Service Reports for fueling, scales, etc.



QUESTIONS???

If you have any questions, contact
dwm@azda.gov or 602-542-4373

View other Division contacts at:

<https://agriculture.az.gov/about-us/divisions/weights-measures-services-division>

